REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-14 are pending, Claims 1 and 7 have been amended by the current amendment to correct a grammatical issue. No new matter has been added.

In the outstanding Official Action, Claims 1-4, 7-11, and 14 were rejected under 35 USC 102(b) as being anticipated by Neff et al.; Claims 5 and 12 were rejected under 35 USC 103(a) as being unpatentable over Neff et al. in view of Abe; and Claims 6 and 13 were rejected under 35 USC 103(a) as being unpatentable over Neff et al. in view of Hu.

Briefly recapitulating, the present invention (claim 1 as amended) is directed to an image encoding device including, among other things, conversion means for converting coding target blocks within a coding target image into conversion information; and encoding means for generating compression data by encoding quantized conversion information based on the size of the blocks, and for generating a compression code used to generate the compression data. The encoding means encodes the quantized conversion information based on a plurality of sizes of the blocks, and generates the compression code corresponding to each size of the blocks. The block size and compression code corresponding to the lowest bit rate is included in header information.

As a consequence of this configuration, the bit rate of compression data can be reduced as a compression code corresponding to an optimal block size for every coding target frame, and can be communicated via the header to the decoder. See the Specification, page 32, line 22- page 33, line 1.

Claim 3 is directed to the analog encoding method of claim 1. Claim 7 is directed to a computer readable medium encoded with computer executable instructions for encoding an image according to the method of independent claim 3.

Claim 8 is directed to an image decoding apparatus including a decoding means for decoding block size information included in a header, and for generating quantized conversion information by decoding compression data based on the decoded block size information. Claim 10 is directed to the analog decoding method of claim 8. Lastly, claim 14 is directed to a computer readable medium encoded with computer executable instructions for decoding an image according to the method of independent claim 10.

The method of the Neff publication uses a "Matching Pursuits" process which teaches away from block based systems. Neff asserts that block based coding results in distortion and block edge artifacts at low bit rates. See page 1, col. 2, lines 10-19 of Neff. Consequently, the Neff system removes grid positioning restrictions.

The official action asserts that Sec. III, Part B, sub-part 3, "Coding Atom Parameters" teaches an encoding process based on block size. Applicants respectfully traverse. That section teaches how to code the parameters for each located atom wherein atoms are located on a block by block basis using the "Find Energy" procedure. However, as stated in Sec. III, Part A, Neff teaches coding a frame using an overlapping window motion as opposed to a block-based DCT system to avoid the artifacts problem discussed above.

Consequently, Applicants respectfully submit that, contrary to the assertions in the office action, Neff fails to teach or suggest optimizing the block size or communicating the optimal block size, used in coding a frame, to a decoder using the header of the frame. Further, the Official Action does not explain how the cited passage of Neff et al. discloses the feature of encoding the quantized conversion information based on a plurality of sizes of the blocks, and generating the compression code corresponding to each size of the block. The Official Action asserts that Neff et al. discloses that the block size and compression code corresponding to the lowest bit rate is included in header information. However, the passage cited in the Official Action does not teach that subject matter. Thus, Neff et al. are not

believed to anticipate or render obvious the subject matter of the present invention (claims 1, 3, 7, 10, and 14) when considered alone of in combination with the applied secondary references. The dependent claims are believed to be allowable for at least the same reasons that their respective independent claims are believed to be allowable.

Regarding dependent claim 6, although the passage relied upon by the Official Action includes the word "table," the passage does not disclose the feature of claim 6 wherein the encoding step includes executing the arithmetic coding by using predetermined probabilities stored in a table having different values according to the size of the block.

In view of the present amendment and in light of the above discussions, it is believed that the outstanding rejection is overcome, and the application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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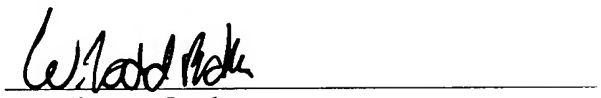

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